

Patent Claims

1. Supported composition containing gold and/or silver particles, titanium oxide and a support containing silicon, characterised in that the surface of the composition bears groups selected from among alkylsilicon, arylsilicon, alkyl groups containing fluorine or aryl groups containing fluorine.
5
2. Supported composition according to claim 1, characterised in that more than 50% of the OH groups on the surface of the supported composition are coated by alkylsilicon, arylsilicon, alkyl groups containing fluorine or aryl groups containing fluorine.
10
3. Supported composition according to one or more of claims 1-2, characterised in that the composition contains additional foreign oxides selected from groups 5, 3, 4, 8, 13, 14 and 15 of the IUPAC 1985 periodic system or mixtures of foreign oxides.
15
4. Process for the production of a supported composition according to claim 1, characterised in that the surface of the support containing silicon and/or supported composition is treated.
20
5. Process according to claim 4, characterised in that the surface treatment is performed with organosilicon and/or organic compounds containing fluorine.
- 25 6. Process according to one or more of claims 4 to 5, characterised in that siloxanes, silazanes, disilanes and/or chlorosilanes or a combination of these are used as the organosilicon compounds.
- 30 7. Process according to one or more of claims 4 to 6, characterised in that the support is subjected to water treatment before the surface treatment and the excess water and optionally salts are then removed.

- 5
8. Process according to one or more of claims 4 to 7, characterised in that the surface-modified support containing silicon is coated with gold in non-aqueous solvents or in mixtures of organic solvents and water.
9. Process according to one or more of claims 3-8, characterised in that one or more of the particular soluble promoter precursor compounds is/are additionally used.
- 10
10. Use of the supported composition according to one or more of claims 1 to 3 for oxidising hydrocarbons in the presence of oxygen and a reducing agent.
11. Use according to claim 10, characterised in that the hydrocarbons are unsaturated hydrocarbons.
- 15
12. Use according to claim 10, characterised in that propene is oxidised to yield propene oxide.